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Recording and reproducing Soundscapes - using and interpreting data in a creative way?

In my thesis I'll focus on soundscape studies and their meaning for sound design. The empirical data is based on the materials gathered in the course of the project called One Hundred Finnish Soundscapes, a three-year (2004-2006) research program for collecting soundscapes within the geographical borders of Finland.

To date One Hundred Finnish Soundscapes was the most comprehensive attempt in Finland to explore the qualitative aspects of the sound environment and the ways in which the people living within their soundscapes experience their environments. The primary aim was not the collection of materials, but to increase the awareness of the meaningfulness of soundscapes. In addition, the project has stressed the importance of soundscapes for the well-being of communities, and the fact that soundscapes are multifaceted.

Theoretical framework is based on acoustic ecology, which is a discipline in which people are studied in relation to their acoustic environment. The father of this concept is R Murray Schafer (The tuning of the world 1997¹). Soundscape, acoustic perspective, key sounds and sound marks are few examples of Schafer's way of analyzing our acoustic environment.

How to use and interpret data in a creative way?

Data is something to begin with but without a meaning it's not even information as such. In a creative process making perceptions in physical environment is the starting point. The next phase is to analyze. The artist tries to interpret his/her subjective perceptions and their meaning to others by generalizations and abstractions. In sound design this is called acoustic communication. To understand sonic perceptions in a proper way one has to enhance his/her ability to recognize soundscapes and understand different sounds (e.g. a musician has to know when his/her instrument is in tune or how to play in the same tempo and rhythm with the other players). Acoustic competence needs to be learned, it's not ready in anyone's genomes. In Barry Truax's own words:

The theory of acoustic communication substitutes information for energy or signals as the basic "unit" of its model. Hence, since information is the result of cognitive

activity, listening is placed at the centre of the process, not at some final stage of a series of energy/signal transfers. The linear transportation model of signals, in turn, is replaced with the notion of sound as mediating the relationship of listener and environment, where the direction of influence can proceed in both directions. That is, the communicational situation can be modified, either with a change in the physical environment itself, or simply with the listener's perceptual habits. And finally, the notion of context, which is frequently ignored in traditional models, is given a central place in acoustic communication, in the sense that sonic information is dependent both on the nature of the sound itself and its context.(B.Truax 1993,2)ⁱⁱ

The concept of acoustic communication is listener centered and context sensitive and gives more emphasis to relationships and processes dealing with the complexities of a communicational situation. The data itself –e.g. sonic objects and phenomena are just material from which the artist works out meanings in these terms – more or less creative way.

The relationship between a research object and data?

The research object might be action or processes as acoustic communication. Data is more like evidence material. It doesn't have to be in causal relationship to research object. Data is details, research object is a viewpoint. In my study the research object is "creating meanings in sound design and how soundscape studies can be used to benefit the work of a sound designer". The data consists of sounds as well as people's writings and descriptions of Finnish soundscapes. My task is to analyze the written soundscapes and create representations from sound archives and recordings and acoustically communicate with people. Also scientific theories are data: acoustics, perception psychology, communication studies etc. The scholar has to learn the background for concepts and methods to be able to research.

Art and design processes can be documented for research purposes by case studies and reflecting them. The methodology in my study will be (1) content analysis of the written descriptions and the recordings of soundscapes (example of concepts for analysis by Hellström (2002)ⁱⁱⁱ) (2) Ethnographic observation of the work of a sound designer in media to describe the typical work flow and production processes from field recordings to postproduction: how to gather the sound effects and reproduce soundscapes and ambiances by layering and mixing? (3) Artistic work of my own, getting feedback, reflecting it and doing it again.

The role of data – how is it used in different phases of study?

In the beginning of a study the role of data has the strongest emphasis for the researcher: compiling material and making observations, reading other studies on the same field. After that the importance and meaning of data is dependant of the method chosen. Artistic approach usually means shaping material – so that it's not the same than the original. The most difficult question for the artist is how to shape? How to make abstractions from authentic data?

The research question guides the acquisition of data depending of the study method. For me the problem is not just how to gather sound material as data, but merely how to use subjectively written descriptions of soundscapes as well: how to evaluate whether the material is valid and reliable in relation to my research questions.

Research questions

In my study I am going to observe how soundscape studies can be used to benefit the work of a sound designer e.g. in fictional narrative. For example: how is it possible to create (=reproduce) soundscapes which sound natural? How can a designer create synthetically acoustic perspectives? What are true sound marks on modern times? How can you be sure that the listener is able to recognize places in his own sound memory? If a drama is meant to happen in Helsinki Senate square, what are the key sounds there has to be in the background to make the place recognizable but still abstract and artistic (= not too realistic).

Further questions

Hearing and listening sonic environment means that there are three elements: first that there is a sound source (sound object), second that there is an acoustic environment and third subject who makes the perception in an active or passive way. One of my objectives is to analyze these relations.

What is typical for the perception of soundscapes? What is the profile of a soundscape as a compilation of sound objects? Sound has a temporal nature as well. How can a sound designer condense (make shorter) the sound events? What kind of sonic features are needed to make sounds more recognizable? Is that important? For artistic use - maybe it's better to ponder how to maintain the obscure and ambiguity nature at least in fiction?

Hypothesis

Sequal or mixed sound effects which are recorded in different spaces and in different time and played as such will not reproduce a convincing soundscape. Our generation in the western world has been brought up by similar media experiences and that has unified and reduced our ability to recognize our real sonic environment. Therefore a sound designer has to simulate and copy soundscapes from media itself: a "real" sound recording doesn't sound natural!

If we cannot make recordings from the real world and use them as such, we must analyze sound representations and memories of the people and try to reproduce them, not just rely on artistic intuition. In my mind this still means using and interpreting data in a creative way. Its acoustic communication – *the direction of influence can proceed in both directions*- as Truax put it.

ⁱ Schafer, R. Murray 1977: The Tuning of the World. New York: Alfred A. Knopf.

ⁱⁱ Barry Truax;The Soudscape Newsletter, Number 05., March, 1993.
http://wfae.proscenia.net/library/articles/truax_acousticcom.pdf

ⁱⁱⁱ Hellström, Björn 2002: The Sonic Identity of European Cities. In Järviluoma, Helmi ja Wagstaff, Gregg: Soundscape Studies and Methods. The Finnish Society for Ethnomusicology, publ. 9, Department of Art, Literature and Music, Series A 51. Helsinki.